AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A transportation crew dispatch method based on one-day business, comprising the steps of:

(A) generating a plurality of initial samples randomly, each including a two dimensional transportation crew dispatch coding table having a plurality of transportation duties, wherein the transportation crew dispatch coding table corresponds to one chromosome in a genetic algorithm, and each transportation duty in the transportation crew dispatch coding table corresponds to a gene in the genetic algorithm;

(B) assigning the initial samples as parent samples, and performing a sample estimation based on object functions and confinement formulas to acquire sample fitness values of the chromosomes;

(C) enhancing selection possibilities of chromosomes with relative superior fitness values by rule of roulette wheel;

(D) performing processes of chromosome crossover and mutation responsive to the selection possibilities of single point cutting and double point cutting;

(E) executing a process of sample update by partial gene exchange, wherein a fitness value of each sample is determined from business cost, satisfaction of fairness index, and the a disobedient cost of the confinement formulas; and

(F) when the number of execution from step (B) to (E) has reached a limited value, or the confinement formula has a disobeying number of zero and variation of the sample fitness value is within a preset value, stopping the method; otherwise, the utilizing acquired samples being utilized as a parent generation and then performing the steps of (B) to (F) again.

2. (Original) The transportation crew dispatch method based on one-day business as claim in claim 1, wherein the transportation crew is a cockpit crew.

3. (Currently Amended) The transportation crew dispatch method based on one-day business as claim in claim ~~3~~ 1, wherein the confinement formula includes a confinement of continuous working days, a maximum duty time confinement, a minimum rest time confinement, a duty time confinement, a standby member confinement, a driving training confinement, a special area driving confinement, a special line driving confinement, a confinement of the relation to the previous schedules, and a confinement of predetermined transportation duty combination.

4. (Original) The transportation crew dispatch method based on one-day business as claim in claim 3, wherein the object function includes cost of the confinement formula being zero, business cost being minimized, and the fairness index being uniformly distributed.

5. (Original) The transportation crew dispatch method based on one-day business as claim in claim 1, wherein the transportation crew is a cabin crew.

6. (Original) The transportation crew dispatch method based on one-day business as claim in claim 5, wherein the confinement formula includes a special station confinement in the duty combinations, a confinement of current day or next day for executing a duty, a confinement of a duty being executed at current day or next day, a special line confinement; and a confinement of the duty allowance, fairness of a special line or non-local lodging.

7. (Original) The transportation crew dispatch method based on a one day business as claim in claim 6, wherein the object function of chromosomes is divided into four parts: minimum level of the business cost, average level of a fairness index, satisfaction of personalization, and non-satisfaction level of each confinement formula.

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8. (Original) The transportation crew dispatch method based on a one day business as claim in claim 7, wherein the object function includes business costs, fairness indexes, personalization factors, and costs of confinement formulas.

9. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the business costs includes costs of entering into or leaving from a duty and costs of non-local lodging.

10. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the fairness indexes include meal fees, number of times of holidays, combinations of the carrier type, total numbers for waiting duties; and total time for executing duties.

11. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the factors of personalization includes personalized dispatch for standby duty and personalized dispatch for general duties.

12. (Original) The transportation crew dispatch method based on a one day business as claim in claim 8, wherein the disobedient cost of the confinement formulas is a product of a number of times that the chromosomes disobeying the confinement and corresponding penalty value.

13. (Original) The transportation crew dispatch method based on a one day business as claim in claim 12, wherein the disobedient cost of the confinement formula is zero.